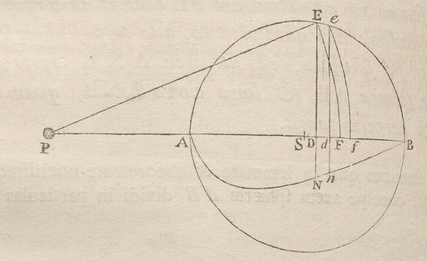
exercita conjunctim. Eſt autem (per lemma noviſſimum) $\mathcal{D}d$ ad Ff ut $\mathcal{P}E$ ad $\mathcal{P}S$, & inde Ff æqualis $\frac{\mathcal{P}S \times \mathcal{D}d}{\mathcal{P}E}$; & $\mathcal{D}Eq \times Ff$ æquale $\mathcal{D}d$ in $\frac{\mathcal{D}Eq \times \mathcal{P}S}{\mathcal{P}E}$, & propterea vis laminæ $EFfe$ eſt ut $\mathcal{D}d$ in $\frac{\mathcal{D}Eq \times \mathcal{P}S}{\mathcal{P}E}$ & vis particulæ ad diſtantiam $\mathcal{P}F$ exercita conjunctim, hoc eſt (ex hypotheſi) ut $\mathcal{D}N \times \mathcal{D}d$, ſeu area evaneſcens $\mathcal{D}Nnd$. Sunt igitur laminarum omnium vires, in corpus $\mathcal{P}$ exercitæ, ut areæ omnes $\mathcal{D}Nnd$, hoc eſt, ſphæræ vis tota ut area tota ANB. *Q. E. D.*



Corol. 1. Hinc ſi vis centripeta, ad particulas ſingulas tendens, eadem ſemper maneat in omnibus diſtantiis, & fiat $\mathcal{D}N$ ut $\frac{\mathcal{D}Eq \times \mathcal{P}S}{\mathcal{P}E}$; erit vis tota, qua corpuſculum a ſphæra attrahitur, ut area ANB.

Corol. 2. Si particularum vis centripeta ſit reciproce ut diſtantia corpuſculi a ſe attracti, & fiat $\mathcal{D}N$ ut $\frac{\mathcal{D}Eq \times \mathcal{P}S}{\mathcal{P}Eq}$; erit vis, qua corpuſculum $\mathcal{P}$ a ſphæra tota attrahitur, ut area ANB.

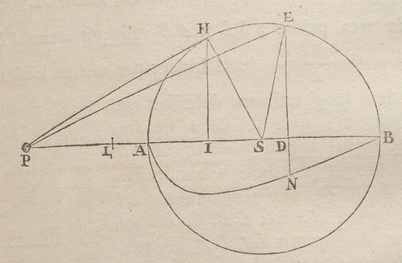
Corol. 3. Si particularum vis centripeta ſit reciproce ut cubus diſtantiæ corpuſculi a ſe attracti, & fiat $\mathcal{D}N$ ut $\frac{\mathcal{D}Eq \times \mathcal{P}S}{\mathcal{P}Eqq}$; erit vis, qua corpuſculum a tota ſphæra attrahitur, ut area ANB.

Corol. 4. Et univerſaliter ſi vis centripeta ad ſingulas ſphæræ particulas tendens ponatur eſſe reciproce ut quantitas V, fiat autem $\mathcal{D}N$ ut $\frac{\mathcal{D}Eq \times \mathcal{P}S}{\mathcal{P}E \times V}$; erit vis, qua corpuſculum a ſphæra tota attrahitur, ut area ANB.

PROPOSITIO LXXXI. PROBLEMA XLI.

Stantibus jam poſitis, menſuranda eſt area ANB.

A puncto $\mathcal{P}$ ducatur recta $\mathcal{P}H$ ſphæram tangens in H, & ad axem $\mathcal{P}AB$ demiſſa normali HI, biſecetur $\mathcal{P}I$ in L; & erit (per prop. XII. lib. 2. elem.) $\mathcal{P}Eq$ æquale $\mathcal{P}Sq + SEq + 2\mathcal{P}S\mathcal{D}$. Eſt autem SEq ſeu SHq (ob ſimilitudinem triangulorum $S\mathcal{P}H, SHI$) æquale rectangulo $\mathcal{P}SI$. Ergo $\mathcal{P}Eq$ æquale eſt contento ſub $\mathcal{P}S$ & $\mathcal{P}S + SI + 2S\mathcal{D}$, hoc eſt, ſub $\mathcal{P}S$ & $2LS + 2S\mathcal{D}$, id eſt, ſub $\mathcal{P}S$ & $2L\mathcal{D}$. Porro $\mathcal{D}E$ *quad.* æquale eſt $SEq - S\mathcal{D}q$, ſeu $SEq -$



$LSq + 2SL\mathcal{D} - L\mathcal{D}q$, id eſt, $2SL\mathcal{D} - L\mathcal{D}q - ALB$. Nam $LSq - SEq$ ſeu $LSq - SAq$ (per prop. VI. lib. 2. elem.) æquatur rectangulo ALB. Scribatur itaque $2SL\mathcal{D} - L\mathcal{D}q - ALB$ pro $\mathcal{D}Eq$; & quantitas $\frac{\mathcal{D}Eq \times \mathcal{P}S}{\mathcal{P}E \times V}$, quæ ſecundum corollarium quartum propoſitionis præcedentis eſt ut longitudo ordinatim applicatæ $\mathcal{D}N$, reſolvet ſeſe in tres partes $\frac{2SL\mathcal{D} \times \mathcal{P}S}{\mathcal{P}E \times V} - \frac{L\mathcal{D}q}{}$

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